

### **REMARKS/ARGUMENTS**

Applicants gratefully acknowledge the withdrawal of claim rejections based on Hawkes *et al.* in view of Forster *et al.*; and over Argy *et al.*. Applicants have added new claim 23 to recite that a process of the invention utilizes a conveyor belt for carrying the stream of latex for coagulation.

#### **Claim Rejections under 35 U.S.C. § 103**

The Office Action rejected claims 2-6, over Giiurak *et al.* in view of Mork *et al.*, and Forster *et al.*. Applicants respectfully traverse, and detail their reasons below.

All three references have been cited and discussed in the previous Office Action and applicants' reply thereto. Applicants note that the present invention relates to coagulation of natural rubber latex, a process in which the latex is merely condensed and dried. It is not a polymerization process, which occurs later when the raw (albeit dried) latex is further processed by e.g. curing or vulcanization.

Giiurak *et al.* relates to a chemical coagulation and drying process. It provides appropriate temperature via heating coagulant solution, and does not use microwave or hot air. The heating step of Giiurak *et al.* uses steam or a heat exchanger to heat the coagulant solution, and thus requires an enclosed environment, such as the pneumatic conveyor used. In contrast, the present invention uses hot air which can be used on a conveyor belt. The entire disclosure of Giiurak *et al.* contains no mention of microwave or conveyor belt.

Forster *et al.* (e.g. at col. 5, lines 51-59) arguably relates to polymerization of synthetic rubber, and to a post-polymerization drying process of synthetic rubber (see e.g. col. 8, lines 32-42). The use of two microwave ovens and different frequencies are both for drying process, and the microwave/heat combinations is also for drying, not for coagulation. The materials to be dried, ranging from food

articles to paper fiber, are transported in a pneumatic conveyor, and are free-flowing granular or pulverized materials carried with pneumatic conveyor (see e.g. col. 4, lines 4-5). It does not disclose a continuous stream of natural rubber latex on a conveyor belt, and is not related to coagulation of natural rubber.

Mork *et al.* relates to polymerization of high-internal phase emulsion. It does not relate to rubber latex coagulation or drying in any way at all.

The above references, even if combined, does not teach the use of a combination of microwave heating and hot air for coagulation and drying of rubber latex. Furthermore, there is no teaching or suggestion anywhere in any of the cited reference that rubber latex can be coagulated with heat energy from microwave or a combination of microwave and hot air. In addition, Mork *et al.* is completely non-analogous art and does not provide any motivation that the open conveyor belt can be used for a rubber latex coagulation and drying process. Therefore, applicants respectfully submit that the Office Action has failed to establish a *prima facie* case of obviousness and the rejection relying on these references is improper and should be withdrawn. As previously amended, Claim 2 further recites that the temperature of the claimed process is in the range of from 30°C to 90°C, which is a coagulation temperature range, rather than the curing temperature for curing alone, which is considerably higher. Applicants respectfully submit that this amendment further renders the claims free of the prior art.

With regard to Claims 3-5, the Office Action did not provide any specific reason for their rejection. In any event, they all depend from Claim 2, which as indicated above is free of the prior art. Accordingly, these dependent claims, including new claim 23, are allowable as well.

Similarly, the rejection of Claim 6 in the Office Action, further in reliance of Collins *et al.*, is improper and should be withdrawn, because Claim 6 depends

from Claim 1, and Collins *et al.* does not remedy the deficiencies of the cited references.

In conclusion, applicants respectfully submit that all claims are now in condition for allowance, and earnestly solicit an early indication from the Examiner to that effect. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (CAM #: 010767.50045US).

Respectfully submitted,

April 28, 2004



---

Kening Li, Ph.D.  
Registration No. 44,872  
James F. McKeown  
Registration No. 25,406

CROWELL & MORING, LLP  
Intellectual Property Group  
P.O. Box 14300  
Washington, DC 20044-4300  
Telephone No.: (202) 624-2500  
Facsimile No.: (202) 628-8844  
JFM:KL:tlm (010767.50045US; 313486)